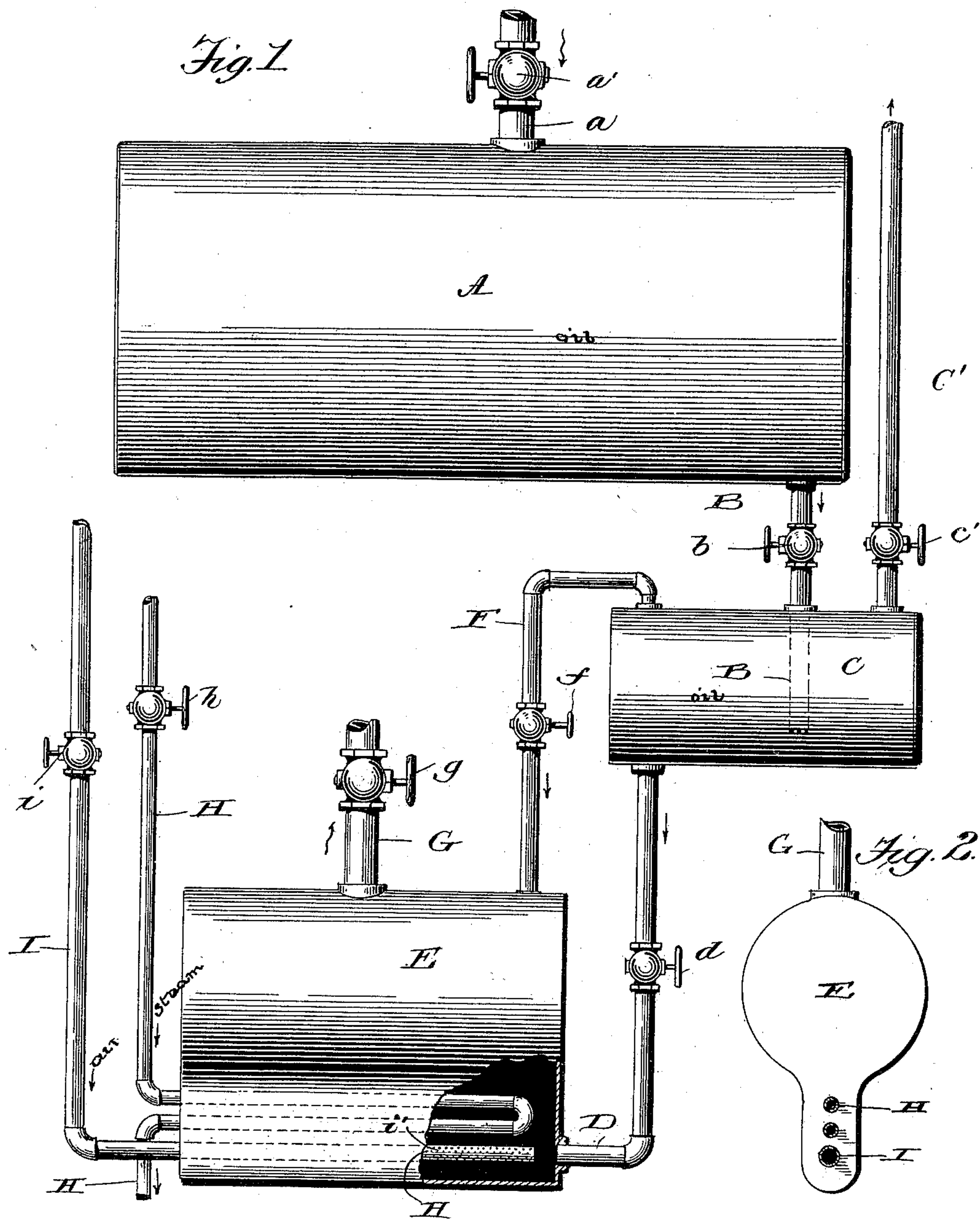


(No Model.)

H. C. SCHRADER.  
CARBURETER.

No. 566,413.

Patented Aug. 25, 1896.



Witnesses:  
L. C. Hills  
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# UNITED STATES PATENT OFFICE.

HENRY C. SCHRADER, OF HAMMONDVILLE, PENNSYLVANIA.

## CARBURETER.

SPECIFICATION forming part of Letters Patent No. 566,413, dated August 25, 1896.

Application filed December 23, 1895. Serial No. 573,099. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY C. SCHRADER, a citizen of the United States, residing at Hammondville, in the county of Fayette, State of Pennsylvania, have invented certain new and useful Improvements in Carbureters, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in gas-making apparatus; and it has for its object, among others, to provide a simple and cheap plant or apparatus whereby the gas may be manufactured  
15 rapidly and at a small cost. It is designed, primarily, for use in such parts of the country as are not provided with gas of any kind. The apparatus embodies a storage-tank, an intermediate tank connected therewith and  
20 with the gas-making reservoir, the latter being provided with a steam pipe or coils and an air-pipe extending thereinto and provided with minute perforations. I provide means for equalizing the pressure in the gas-making tank and I avoid pressure or heat in the  
25 storage-tank.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed  
30 out in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

35 Figure 1 is a side elevation of my improved apparatus with a portion of the gas-making tank broken away. Fig. 2 is an end elevation of the gas-making tank with the inlet-pipes in cross-section.

40 Like letters of reference indicate like parts in both of the views.

Referring now to the details of the drawings by letter, A designates the storage-tank, of any desired capacity, provided with the supply-pipe *a*, leading from any suitable source  
45 of supply (not shown) and provided with a valve *a'*, whereby the supply may be controlled and regulated. From the bottom of this tank extends a pipe B, having a suitable  
50 valve *b* and extending into the intermediate tank C, of small capacity compared with the

tank A, the said pipe extending thereinto nearly to the bottom thereof, as indicated in Fig. 1. This tank C is provided with a vent-pipe C', having a suitable valve *c'*, and from  
55 the lower end of said tank extends a pipe D, having a suitable valve *d* and extending into the gas-making tank or chamber E. This tank is preferably of the shape shown, that is, pear-shaped, and the pipe D communicates  
60 therewith at the lower portion of the contracted part of said tank. A pipe F affords communication between the top of the tank C and the top of the tank E and is provided with a valve *f*. This is for equalizing the  
65 pressure within the tanks.

G is a pipe extending from the top of the tank E and forming the gas-outlet, and this pipe is provided with a valve *g*, as shown.

H is a steam-pipe adapted to be connected  
70 with any suitable source of supply and provided with a valve *h*. This pipe extends within the lower portion of the tank E and has one or more coils within the same, and after passing through the said tank the re-  
75 quired number of times the end thereof is again brought out, as indicated in Fig. 1.

I is a pipe provided with a valve *i* and adapted to be connected with any suitable source of supply for compressed air. This  
80 pipe extends into the lower portion of the tank E and within said tank is provided with numerous perforations *i'*.

In operation the tank A is filled with benzin or the like, the valve *b* is opened, and the  
85 tank C allowed to fill, and the benzin from this tank flows into the tank E through either the pipe D or the pipe F, the flow being controlled by the valves therein and the valve in the vent-pipe C' being opened. Steam is  
90 then admitted to heat the oil, and then the compressed air is forced through the pipe I at the bottom of the tank E and thoroughly mixed with the benzin. The gas thus generated is conducted from the tank E through  
95 the pipe G to the desired place of usage. This gas makes a very hot fire and is produced at minimum cost and with but little attention on the part of the attendant. The intermediate tank is an important element  
100 in the device, permitting of the making of the gas continuously and also relieving pres-



sure from the storage-tank, so as to avoid any possibility of danger.

What I claim as new is—

1. The apparatus described, comprising the  
5 storage-tank with supply-pipe and valve, an  
intermediate tank, a pipe connected with the  
bottom of the storage-tank and extending  
into the intermediate tank and provided with  
a valve, an independent vent-pipe from the  
10 intermediate tank provided with a valve, the  
gas-making tank having contracted lower  
portion, a pipe connecting the bottom of the  
intermediate tank with said contracted por-  
tion and having a valve, a pipe connecting  
15 the top of the intermediate tank with the top  
of the gas-making tank and provided with a  
valve, a steam-pipe provided with a valve  
and extended into and coiled within the con-  
tracted portion of the gas-making chamber  
20 with its other end passed out through the  
same, and a compressed-air pipe extending  
into the contracted portion of the gas-mak-  
ing tank below the coils of the steam-pipe  
and provided with minute perforations, sub-  
25 stantially as specified.

2. The gas-making apparatus described,  
comprising the storage-tank with supply-pipe,  
the gas-making tank, the gas-outlet pipe con-  
nected with its upper side and provided with  
a valve, the steam-coil arranged within the 30  
lower portion of the gas-making tank, a pipe  
for admitting compressed air into said lower  
portion and perforated within the same, a  
tank intermediate the storage and gas-mak-  
ing tank, a pipe leading from the storage- 35  
tank into the intermediate tank, a vent-pipe  
extending from the upper side thereof inde-  
pendent of the other pipes, a pipe connect-  
ing the upper side of the gas-making tank  
with the upper side of the intermediate tank, 40  
and an independent pipe connecting the lower  
end of the intermediate tank with the bot-  
tom of the gas-making tank; all substantially  
as described.

In testimony whereof I affix my signature 45  
in presence of two witnesses.

HENRY C. SCHRADER.

Witnesses:

E. L. RUTHERFORD,  
THOS. H. RUTHERFORD.